NiTek Trio
Dive Computer
User Guide

DIVE RITE™

www.diverite.com

Date of Purchase _____

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Chapter 1

Introduction

Summary

This chapter provides an overview of the NiTek Trio, lists the NiTek Trio's features and functions, and covers warning information that should be read before using your NiTek Trio.

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Overview

Congratulations on your purchase of the NiTek Trio dive computer. The NiTek Trio is a sophisticated and comprehensive dive computer that was designed to offer you the latest in dive computer technology, safety, and reliability.

The NiTek Trio dive computer is a multifunctional computer for recreational diving, providing information on depth, dive times, no-decompression and decompression times, and nitrogen and oxygen absorption and elimination during all dive phases, including ascent, surface interval times, and subsequent dives.

This information is displayed on an easy-to-read display, providing simple and direct communication between the diver and the computer. With an easy-to-read display, the diver has no problem following and reading the displayed information.

The NiTek Trio comes standard with a number of modes, including a time mode, dive set mode, dive plan mode, log mode, profile mode, PC transfer mode, compass mode and dive mode.

Note: It is extremely important that you carefully read and understand this manual. Make sure you fully understand how the NiTek Trio operates before diving with it.

This manual has been divided into three chapters:

- **Introduction:** Covers the features and functions, specifications, and warnings for the NiTek Trio
- **Using the NiTek Trio:** Covers the operation of each mode for the NiTek Trio
- **Care and maintenance:** Covers how to properly care for and maintain the NiTek Trio and change the battery

Features and Functions

The NiTek Trio incorporates a number of important modes and features:

- The NiTek Trio turns on automatically upon descent.
- On the surface, the NiTek Trio displays a minimum of date, time and temperature when activated.
- To conserve battery life, the NiTek Trio will enter the “Sleep” mode after several minutes of inactivity.
- The NiTek Trio uses easily accessible and highly reliable push buttons instead of exposed electrical contacts.
- The NiTek Trio can be programmed to monitor exposure to up to three different gas mixtures during a dive. All three mixes are programmable for mixtures ranging from air (EAN21) to EAN99. Underwater, NiTek Trio users can switch between mixes at the push of a button.
- The NiTek Trio is capable of functioning up to a depth of 328 feet (100 meters) when in dive computer or gage mode
- The NiTek Trio automatically adjusts for altitudes up to 19,685 feet (6,000 meters)
- The NiTek Trio has a digital compass integrated into the front-panel dot-matrix display
- The NiTek Trio displays a variety of data underwater including: date, time of day, current and maximum depths, no-decompression dive time elapsed and remaining, compass heading, and water temperature
- The NiTek Trio displays data specifically related to the use of Enriched Air Nitrox (EANx) including: fraction of oxygen (FO2) setting, partial pressure of oxygen (PO2), and an oxygen limit index (OLI) representing the cumulative effect of a diver’s exposure to elevated PO2s (the theoretical “CNS clock”) as a bar graph
- Through a combination of audible and visible alarms, the NiTek Trio helps to alert the diver to a number of possibly hazardous situations including: violation of ascent rate, no-decompression state, and whether mandatory decompression

stops are necessary or if the diver has ascended above a mandatory stop ceiling. Nitrox specific warnings occur when the diver approaches or exceeds a limiting PO2 of 1.6 atmospheres for all mixtures, and when cumulative exposure to elevated PO2s exceeds recommended limits.

- The NiTek Trio can calculate decompression stop requirements for stops as deep as 90 feet (27 meters)
- The NiTek Trio can be programmed to display data in Imperial or metric units
- Dive depth can be displayed in fresh or salt water equivalents
- Special mode indicators make it easy to determine what display mode or screen you are in at any time
- The NiTek Trio has a back light to illuminate the screen, which can be turned on with the touch of a button
- The NiTek Trio's memory capability enables it to hold and display log data on up to 30 hours of dive time or 60 dives
- Detailed dive-profile information can be stored for each dive through user-programmable sample intervals of 10 or 30 seconds (longer intervals allow data for a greater number of dives)
- Dive data can be uploaded and stored in a dive log format on a desktop or laptop computer using the NiTekLogic™ software and optional PC interface

Specifications

Algorithm: Buhlmann ZH-L16
Sample tissues: 9
Tissue half-lives: from 5 to 640 minutes
Size and weight
- Diameter: 2.5 in (62 mm)
- Height: 1.0 in (25 mm)
- Weight: 4 ounces (115 g)

Display face
- Backlight illumination
- Low battery indicator
- Three user buttons
- Water immersion switch

Depth sensor
- Sea or fresh water calibration
- Measuring range: 0 to 328 feet (0 to 100 m) measured every second
- Accuracy: +/- 3% + 2 feet (0.5 m)
- Surface interval time: from 0 to 48 hrs
- Diving time: 0-599 minutes Dive mode, 0-1199 minutes Gage mode
- Ascent rate warning: 26 to 52 feet per minute (8 to 16 m)

Thermometer
- Operating range: 23 °F to 104 °F (-5 to 40 °C)
- Accuracy: +/- 4 °F (2 °C)
- Measurement interval: Every minute

Clock
- Accuracy: +/- 30 sec on average per month
- 24-hour display

Compass
- Measuring range: 0° to 360°

Altitude
- Altitude function monitoring: from 0 to 19,685 feet (6,000 m) measured every 10 minutes
- Accuracy: +/- 800 feet (250 meters)

Battery
- Li/MnO2 CR 2032 3V button battery
- Average battery life: About 3 years (50 dives/year)
- Replacement: User replaceable or return to manufacturer

Breathing gas
- Mixes: 3 gas settings
- O2 setting range: Mix1 – Mix3: 21 to 99 percent
- O2 setting: 1% increments

Dive log
- Dive logging: Maximum of 60 dives
- Profile logging: Maximum of 30 hours
- Profile sampling rates: 10 or 30 seconds

Warnings

This information has been developed for your safety. Please read and understand this manual completely before using your NiTek Trio dive computer.

Important safety information:

- Before using your NiTek Trio, it is extremely important that you read the following points—as well as similar warning and caution notices that appear throughout this manual. Failure to do so could result in damage to or loss of equipment, serious personal injury, or death.
- The NiTek Trio is designed for use by certified divers who have maintained a sufficient level of knowledge and skill proficiency through a combination of formal training, ongoing study, and experience. It is not intended for use by persons who lack these qualifications and thus, may not be able to identify, assess, and manage the risks scuba diving entails. Use of the NiTek Trio in conjunction with Enriched Air Nitrox (EANx) requires that divers be trained and certified for Nitrox diving.
- The NiTek Trio is not intended for use by commercial or military divers whose activities may take them beyond the commonly accepted depth limits for recreational or technical diving.
- Although the NiTek Trio is capable of calculating decompression stop requirements, users must remember that dives requiring mandatory stage decompression carry substantially greater risk than dives made well within no-decompression limits.
- The NiTek Trio is designed for use by one diver at a time. Divers should not share a single NiTek Trio—or any other dive computer—on the same dive. Additionally, no diver should lend their NiTek Trio to anyone else until it calculates that no measurable residual nitrogen remains after previous dives and no longer displays the “desaturation time” indicator while in time mode. Further, no diver should use their NiTek Trio for repetitive dives—unless that same properly functioning NiTek Trio has accompanied them on all previous dives in the same repetitive dive series and is thus, accurately monitoring the diver’s total exposure to oxygen and nitrogen.
- Neither the NiTek Trio—nor any other dive computer—physically measures the amount of nitrogen present in body tissues or the rate at which nitrogen is being absorbed or released. The NiTek Trio monitors depth and time, and uses this data to work a mathematical

formula designed to emulate how individuals in good general health and whose physical characteristics do not place them among those at higher risk of decompression illness (DCI) are assumed to absorb and release nitrogen from body tissues. Thus, the NiTek Trio cannot compensate for factors such as age, obesity, dehydration, cold, or exertion, which experts believe place divers at greater risk of DCI. If these, or similar factors apply to you, use the NiTek Trio—and other dive computers or dive tables—with even greater caution.

- Little is known regarding the exact nature and causes of decompression illness (also known as decompression sickness, DCI, or DCS). Susceptibility to DCI may vary substantially from person to person and from day to day. Neither the NiTek Trio—nor any other dive table or computer—can guarantee that you will not suffer decompression illness. Even though you use these items correctly, you may still suffer DCI. Use your NiTek Trio conservatively and in conjunction with other dive planning devices, such as dive tables. Do not rely on the NiTek Trio, or any similar device, as your sole means of avoiding decompression illness.

When diving…

- Do not “push” the no-decompression limits (NDLs). Make safety stops before ascending. If you exceed the no-decompression limits, check your breathing gas supply at all stop depths.
- The NiTek Trio does not monitor breathing gas supply. You must monitor this yourself, on every dive, using a submersible pressure gauge or equivalent device.
- Do not rely solely on this or any other dive computer. Take a back-up dive computer or dive tables (along with a separate means of monitoring depth and dive time).
- Be aware that the NiTek Trio makes assumptions regarding residual nitrogen based on altitude settings. Avoid making abrupt changes in altitude following a dive, as doing so may be very dangerous.

Chapter 2

Using the NiTek Trio

Summary

This chapter provides topics about using, setting, and understanding each of the modes and options of the NiTek Trio.

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Getting Started

The NiTek Trio has many modes and screens and a number of options that can be changed depending on your dive location and profile. The following is a checklist of general things that you should pay attention to before, during, and after a dive.

Before a dive

- Check that the proper time and date are set. If you have traveled, your NiTek Trio may still be set to your home time zone.
- Check that the proper mixes are set for mix1, mix2 and mix3. If you are using gauge mode, make sure it is set to “gage.”
- Make sure that you review the dive plan mode for maximum depths and times for the mixes you are using

During a dive

- Monitor the NiTek Trio throughout your dive for depth and time
- Monitor the N2 and O2 loading bar graphs
- Pay attention to any alarms, such as an ascent rate warning
- Follow the no-decompression limits or complete the required decompression displayed and perform the necessary safety stop

After a dive

- Monitor surface interval time if making another dive
- Follow the no-fly requirements
- Review your dive using the log mode and profile mode
- Download the dive log to your PC if you have the optional PC interface

Accessing display modes and screens

There are some display modes that the NiTek Trio enters and/or exits automatically. For example, by taking the NiTek Trio underwater, the dive mode automatically turns on. Upon surfacing, the NiTek Trio automatically enters the time mode.

Accessing other modes or screens requires the use of the NiTek Trio's buttons.

Button operation

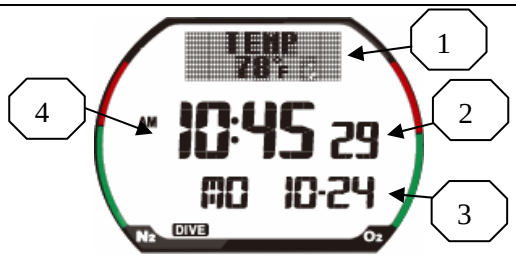
The NiTek Trio has three buttons (select, mode, and set), which are used to access the different modes and screens. To use the buttons, simply press the button once or hold the button down depending on what you are trying to do. The correct procedure to use is clearly defined in each topic throughout the manual.

- Select button (A-key): This button is used to select the option field that you want to change
- Mode button (B-key): This button is used to select and scroll through the different modes, such as time mode
- Set button (C-key): This button is used to set an option's setting, such as setting the date

The front of the NiTek Trio, showing the three buttons that are used to access and setup the different modes and screens

Time Display mode

Time display mode is the NiTek Trio's default mode. The computer returns to this mode automatically upon surfacing from a dive and from other modes when a period of time has passed without any buttons being pressed.



In time display mode, "TEMP" and current temperature (1) is displayed at the top of the screen, and the seconds (2), date (3) and time (4) are displayed. Time can also be displayed in 24-hour (military) time. The NiTek Trio may display additional information concerning exposure to nitrogen and oxygen, desaturation time, surface interval time, and altitude. These items are covered in "Surface mode" and "Altitude operation."

Setting the time and date

Setting the time and date are done in the time set mode. You can enter or change the year, month, day, hours, minutes, and seconds in this mode.

To set the time and date:

1. Repeatedly press Mode until "TIMESET" is displayed at the top of the screen.
   The "seconds" field flashes.
2. Press Set to "00" the seconds, or press Select to go to another field, such as minutes.
3. Using Select and Set, set the year, month, day, hour, minutes, seconds, and whether you want the time displayed in 24-hour format.
   For example, 1:00 PM would be 13:00 in military time.
4. Press Mode.
   The computer returns to the time display mode.

Entering time display mode from another mode

When you are using other modes, it is very easy to return to the time display mode.

To enter time display mode from another mode:

1. Press and hold Mode for two seconds.

—OR—

2. Repeatedly press Mode until “TEMP” and current temperature is displayed.

Activating the back light

The NiTek Trio has a back light that illuminates the screen.

To activate the back light:

1. Press either the Select or Set button.
   The back light illuminates for four to five seconds.
2. Press either button again to reactivate the back light.

Toggling the Character-Display screen

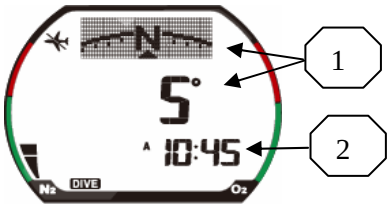
The NiTek Trio has a 2-line display screen that can show either current temperature, time-to-fly information or a user-selectable readout.

To toggle the user-selectable character-display:

1. Enter the Time-Display mode.
2. Press the Select button to switch between current temperature, time-to-fly or the user-selectable readout.
   Note: The user-selectable display can be changed with the NiTek Trio Docking Station and a PC running the NiTek Divelog software while connected to the NiTek Trio. Refer to the NiTek Docking Station User Manual and Divelog software for additional information.

Compass Set and Display mode

Compass Set and Display mode is where the NiTek Trio compass settings are displayed and set up. There are two screens needed to view and set up the compass.



Compass display

(1) Angular display, in cardinal points and degrees

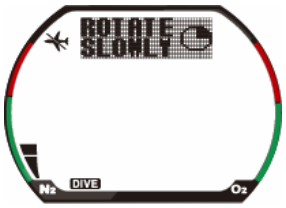
(2) Current time

To enter compass mode:

1. Repeatedly press Mode until the heading and time is displayed at the top of the screen.

Calibrating the compass

Before using the compass in a new area or region, you will need to calibrate it to account for any differing magnetic variations.



Compass display in Calibrate mode

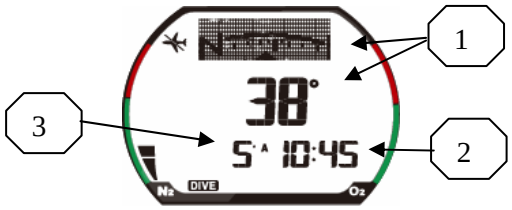
To calibrate the compass:

1. Repeatedly press Mode until the heading display and time is displayed at the top of the screen.
2. Press and hold Set for 4-5 seconds until “ROTATE SLOWLY” is displayed at the top of the screen.

3. Slowly rotate the compass in a circle until “ROTATE OK” is displayed at the top of the screen.
4. Press and hold Set again for 4-5 seconds until the heading display and time is shown once more.

Saving a compass heading

You can save a heading on the compass display to return to later, or to remind you of a heading to follow.



Saved compass heading

(1) Angular display, in cardinal points and degrees
(2) Current time
(3) Saved heading

To save a heading in the compass:

1. Repeatedly press Mode until the heading display and time is shown.
2. Press and hold Select for 4-5 seconds until the heading display and time is displayed at the top of the screen.
   The saved heading will be displayed to the left of the time readout. A small arrow indicating the saved heading will also be displayed above the angular display, if the saved heading is within 45 degrees of the current heading.
   Note: The reciprocal of your heading will also be indicated with a symbol in the display.
3. To erase/remove the saved heading, press and hold Select again for 4-5 seconds until the heading display and time is shown once more.

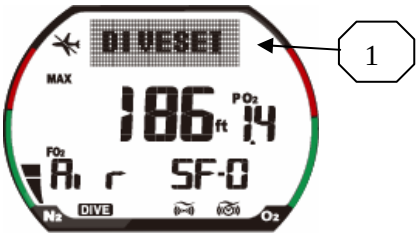
Dive Option Set and Display mode

Dive Option Set and Display mode is where all “dive” option settings are displayed and set up. There several screens needed to view and set up all dive options.

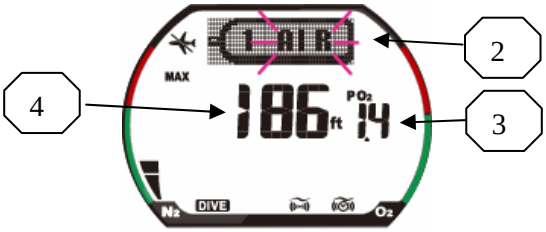
Note: If you are using the NiTek Trio in “Gage” mode, refer to the section entitled ‘Using Gauge Mode’ for further information and setting procedures.

Using computer mode

Computer mode is when the NiTek Trio is operating in the normal computer mode. “DIVESET” is displayed on the screen and all computer mode functions operate normally. The NiTek Trio dive option set and display mode is used to review and change option settings that pertain to an upcoming dive. The operating depth limit when in computer mode is 328 feet (100 meters).



Dive Option Set and Display fields, screen1



Dive Option Set and Display fields, screen 2

(1) Dive operation
(2) Mix1, mix2 and mix3 FO2 gas percentages
(3) PO2 setting: This is the PO2 setting for the mix number selected. The PO2 can be set from 1.0 to 1.6.

(4) Maximum operating depth (MOD) for PO2 setting: This is the safe operating depth (maximum) for the mix selected. This is based on the limiting PO2 factor you have selected.

Additional options and settings that can be selected include:

- Dive safety factor
- Dive profile sampling rate
- Salt or fresh water use
- Maximum depth alarm
- Maximum time alarm
- Metric or Imperial units of measurement

These are described in the following paragraphs.

To enter Dive Option Set and Display:

1. Repeatedly press Mode until “DIVESET” is displayed at the top of the screen.
2. Using the topics that follow, set up your desired dive option settings.
3. If you want to exit DIVESET mode, press and hold Mode for 1 to 2 seconds to return to time mode.

Setting Mix1, Mix2 and Mix3 percentages

You must set the breathing mix you plan on using on your dive. Mix1 is considered the first breathing gas you plan on using during a dive, and Mix2 and Mix3 are considered the second and third breathing gases you are using on a dive.

- Mix1, Mix2 and Mix3 can be set for 21 to 99 percent oxygen

Note: If you only plan on using one mix on your dive, you only need to set Mix1.

To set Mix1, Mix2 and Mix3 percentages:

1. Repeatedly press Mode until “DIVESET” is displayed at the top of the screen.
2. Press Select and either “dive” or “gage” is blinking on the screen and along the bottom of the display.
3. Press Set to select “dive” mode, if not already in that mode. “DIVE” will continue to flash.
4. Press Select once to select the mix1 PO2 field.
5. Press and release Set to increase the PO2.
   The PO2 will increase from 1.0 to 1.6 and then repeat.
6. Press Select again to select the mix1 percentage field.
7. Press and release Set to increase the percentage.

The percentage will increase from air to 99 before repeating (The percentage will stop at 32 percent and again at 99 percent).

Press and hold Set to advance the percentages rapidly.

Note: Nitrox" is displayed if mix1 is set for a FO2 of greater than 21 percent. If mix2 or mix3 is set for 21 percent (air), nothing appears until that mix is selected. If mix1 is in "default," the Nitrox indicator flashes. For more information on "default," see "Understanding FO2 default."

8. Press Select again to advance to mix2. This will lock in mix1.
9. Repeat steps 4 through 7 for mix2. This will lock in mix2.
10. Press Select again to advance to mix3.
11. Repeat steps 4 through 7 for mix3. This will lock in mix3.
12. When finished, press Select to advance to the next option (depth alarm). To exit, press and hold Mode for 1 to 2 seconds to return to time mode.

    NOTE: Unless prior dives that day have been conducted on air (FO2 of 21 percent), the NiTek Trio will reset the gas mixture on following dives to an FO2 of 99 percent if the surface interval is 10 minutes or longer. Please be certain to reset your gas mixture between dives.

Setting the maximum depth alarm

The NiTek Trio has a maximum depth alarm that is activated when the diver reaches the maximum depth that is set. When the max depth is reached, an audible alarm sounds and the display flashes for three seconds.

The alarm can be turned on or off and can be set from 5 to 328 feet (1.5 to 100 meters).

To set the maximum depth alarm:

1. Repeatedly press Mode until "DIVESET" is displayed on the screen.
2. Repeatedly press Select until the screen changes and "DEPTH ALARM" is displayed.

   The max depth is flashing.
3. Press Set to set the depth that you want the alarm to sound.
4. Press Select.

   The max depth alarm "ON/OFF" flashes.
5. Press Set to toggle the alarm on and off.

   The max depth symbol will be shown when the alarm is set.

6. When finished, press Select to advance to the next option (dive time alarm). To exit, press and hold Mode for 1 to 2 seconds to return to time mode.

Setting the dive time alarm

The NiTek Trio has a dive time alarm that is activated when the diver reaches the dive time that is set for the dive. When the dive time is reached, an audible alarm sounds and the screen flashes for three seconds. Dive time alarm can be used when you want to set a maximum dive time for your dive. The alarm indicates when this time has expired.
The alarm can be turned on or off and can be set from 1 to 599 minutes.

To set the dive time alarm:

1. Repeatedly press Mode until “DIVESET” is displayed on the screen.
2. Repeatedly press Select until the screen changes and “DIVETIME ALARM” is displayed.
   The dive time is flashing.
3. Press Set to set the time when you want the alarm to sound.
4. Press Select.
   The dive time alarm “ON/OFF” flashes.
5. Press Set to toggle the alarm on and off.
6. When finished, press Select to advance to the next option (deepstop). To exit, press and hold Mode for 1 to 2 seconds to return to time mode.

Setting the deepstop option

The NiTek Trio has the ability to include deep stops into its decompression algorithm, and they are available for dive-depths deeper than 65 ft (21m). Deep-stops are only available on dives that are actually a decompression dive, as recreational dives do not give deep-stop information. When activated, deep stops will recommend an additional stop (similar to a safety-stop) at its deepest stop at the highest safety-factor level. The deep stop is highly recommended as additional opportunity to off-gas, but is not mandatory. If the diver chooses not to observe a deep-stop, it will not add to the shallower deco-stops.

To set the deep-stop:

1. Repeatedly press Mode until “DIVESET” is displayed at the top of the screen.

2. Repeatedly press Select until the screen changes and "DEEPSTOP" is displayed and "ON" or "OFF" is flashing.
3. Press Set to turn deepstop on or off.
   Deepstop "ON/OFF" flashes.
6. When finished, press Select to advance to the next option (fresh or salt water). To exit, press and hold Mode for 1 to 2 seconds to return to time mode.

Setting for fresh or salt water use

The NiTek Trio is capable of operating using fresh or salt water calculations. This is based on:

- One atmosphere of saltwater is 33 feet (10 meters)
- One atmosphere of freshwater is 34 feet (10.3 meters)

Before going diving, set the computer to the type of water you are diving in. This allows for the most accurate calculations with respect to no-decompression limits, etc.

To set for fresh or salt water:

1. Repeatedly press Mode until "DIVESET" is displayed at the top of the screen.
2. Repeatedly press Select until 'WATER IS' is shown and "FRESH" or "SEA" is flashing.
3. Press Set to toggle between fresh and sea water.
4. When finished, press Select to advance to the next option (profile time). To exit, press and hold Mode for 1 to 2 seconds to return to time mode.

Setting the dive profile sampling rate

The NiTek Trio allows you to choose how frequently it samples and stores depth data. The data it samples and stores is used in profile mode or when the data is uploaded to a personal computer. There are two sampling rates to choose from: 10-second and 30-second.

The 10-second sampling rate enables the computer to sample and store depth data every 10 seconds during a dive. The 10-second sampling rate provides a more detailed dive profile, but because it stores more information, fewer dives can be stored.

The 30-second sampling rate enables the computer to sample and store depth data every 30 seconds during a dive. The 30-second sampling rate is the computer's "default" setting. The 30-second rate provides a less detailed dive profile, but it is capable of storing more information for more dives.

Note: When the computer's memory storage is full, it overwrites the oldest dive profile data stored with the new information.

To set the dive profile sampling rate:

1. Repeatedly press Mode until "DIVESET" is displayed and flashing on the screen.
2. Repeatedly press Select until "Pt" and the sampling rate number is flashing.
3. Press Set to toggle between 10- and 30-seconds.
4. When finished, press Select to advance to the next option (user safety). To exit, press and hold Mode for 1 to 2 seconds to return to time mode.

Setting the safety factor

The safety factor setting is used to add an additional safety margin to the no-decompression limits and decompression stop times. There are three possible settings, 0, 1, and 2. A higher setting results in shorter no-decompression limits and longer decompression stop times.

Setting	Description
0	Calculations are based solely on its built-in algorithm (Buhlmann ZH-L16)
1	Calculations are based on one altitude rank higher than the dive was actually made
2	Calculations are based on two altitude ranks higher than the dive was actually made

To set the safety factor:

1. Repeatedly press Mode until "DIVESET" is displayed at the top of the screen.
2. Repeatedly press Select until "SF" and the safety factor field is flashing.
3. Press Set to select the desired safety factor.
4. When finished, press Select to return to the diveset mode. To exit, press and hold Mode for 1 to 2 seconds to return to time mode.

Setting the computer for metric or Imperial operation

The NiTek Trio can calculate and give you values in Imperial units or metric units. When in metric, depth values are expressed in meters and temperatures are expressed in Celsius (°C). When in Imperial, depth values are expressed in feet and temperatures are expressed in Fahrenheit (°F).

To set for metric or Imperial operation:

1. Repeatedly press Mode until “DIVESET” is displayed on the screen.
2. Press and hold Select and Set simultaneously for 5 to 6 seconds. The computer beeps and changes to either feet (ft) or meters (m).
3. When finished, press and hold Mode for 1 to 2 seconds to return to time mode.

Understanding FO2 default

In your entry-level Enriched Air Nitrox training, you learned that among the greatest risks Nitrox (EANx) use poses is CNS oxygen toxicity. CNS oxygen toxicity can occur if Nitrox is breathed at depths where the partial pressure of oxygen (PO2) exceeds safe limits.

The NiTek Trio is designed to help divers avoid such situations by presenting information and warnings regarding current PO2 levels and cumulative exposure to elevated PO2s. To do so, the NiTek Trio must be set to an FO2 that accurately matches the concentration of oxygen in the gas mixture being breathed.

Similarly, the NiTek Trio is designed to help avoid decompression illness by providing no-decompression limits (NDLs) or mandatory decompression stop information. Again, to do so, the NiTek Trio must be set in a manner that accurately matches the concentration of nitrogen being breathed.

When this information is not available, the NiTek Trio attempts to protect divers by basing its oxygen- and nitrogen-exposure calculations on a “worst case” assumption. This is, that calculations are based on a mixture containing up to 79 percent nitrogen and 99 percent oxygen. This ‘worst case’ calculation is what is referred to as the FO2 default setting.

Default warning indicated by ‘Nitrox’ and upper display blinking, with an audible alarm

When and how FO2 default occurs

One factor in determining if and when your NiTek Trio's FO2 setting is in default is whether you set one or more mixes for air or Nitrox.

- If you set any mix for air (FO2 of 21 percent), the computer assumes that subsequent dives will be made using air. This means that the mix set for air remains set for air, dive after dive, without defaulting.
- However, if you set any mix for Nitrox or oxygen (FO2 of 22 to 99 percent), you will need to reset and verify the mix again for any subsequent dive. This is to help protect you from accidentally diving a Nitrox mixture that cannot accurately be monitored, as the computer's FO2 setting defaults to an FO2 of 99 percent (99% O2) 10 minutes after a dive (it does not default if you are under water). Therefore, you must change the mix-setting if you plan subsequent dives.

Dealing with FO2 default

The best way to deal with FO2 default is to simply avoid it. Make sure that prior to every dive you check the FO2 settings for all mixes. Make sure they accurately match what you are going to breathe during the dive.

When the computer is in FO2 default mode, the Nitrox symbol and the upper display flashes. This indicates that you need to set the percentages for all mixes to the correct FO2.

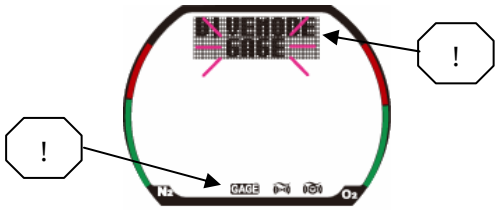
If you go diving when the computer is in FO2 default mode, the OLI and PO2 symbols, current depth, and PO2 value flash, and an audible alarm sounds. The computer's ability to accurately monitor your exposure to oxygen no longer exists.

Note: You should not rely on the NiTek Trio as the sole means of tracking your exposure to elevated partial pressures of oxygen (PO2s). It is recommended that you use either a second Nitrox-capable computer or another tracking method, such as Nitrox tables.

Using gauge mode

If you do not want to use the NiTek Trio as a normal 'dive computer,' the NiTek Trio has a gauge operation. Gauge operation is when the NiTek Trio is operating simply as a depth gauge and bottom timer. "GAGE" is displayed is displayed at the top of the screen and exposure to nitrogen and oxygen and no-decompression limits are not tracked and no bar graphs are displayed. This mode is used by divers who are relying solely on dive tables for decompression information. The operating depth limit when in gauge operation is 328 feet (100 meters).

Note: If you are using the NiTek Trio in “Dive Computer” mode, refer to the section entitled “Using Computer Mode” for further information and setting procedures.



Note: You cannot select gauge operation if the computer calculates that there is still residual nitrogen remaining from a previous dive or if the surface interval is less than 10 minutes. Also, you cannot return to dive computer operation until 48 hours have passed since your last dive.

In gauge mode, you can still set the profile sampling rate, salt or fresh water use, max depth and dive time alarms. For more information, see "Dive Option Set and Display mode."

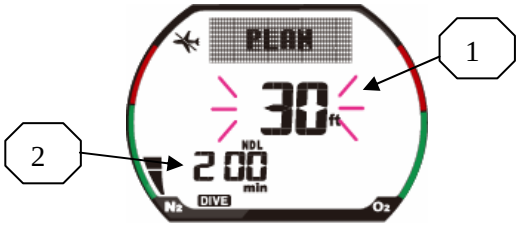
To select and setup gauge operation:

1. Repeatedly press Mode until "DIVESET" is displayed.
2. Press Select and either "DIVE" or "GAGE" is flashing.
3. Press Set to select "gage" mode.
   "GAGE" is displayed in place of "DIVE."
4. Press Select to continue with setup of other settings.

Plan mode

Plan mode enables you to determine how long you can stay at various depths while remaining within the no-decompression limits. The no-decompression time limits are based on the percentage that is set for mix1. If you are making a dive within 24 hours of a previous dive, the no-decompression time limits are based on the residual nitrogen remaining.

The two most important values that are displayed on the screen in plan mode are the depth and no-decompression time limit.



(1) Depth: When you first enter plan mode, the initial depth displayed is 30 feet (9 meters). You can advance the depth in 10 foot (3 meter) increments. Fourteen different dive plan depth increments can be displayed to a maximum depth of 160 feet (48 meters).

(2) No-decompression limit (NDL): Depending on the depth displayed and the current FO2 setting, the available no-decompression limit, up to a maximum of 200 minutes, is displayed. If the computer is in FO2 default, a series of horizontal lines appears.

If the NiTek Trio calculates that there is residual nitrogen present from previous dives, the available no-decompression limits are shorter. Depending on how much residual nitrogen is present, no NDL time may be displayed for some deeper depths. If this takes place, a series of horizontal lines are displayed instead of the time. Similarly, for combinations of depth and FO2 that would cause a diver to exceed a limiting PO2 of 1.6 atmospheres, a series of horizontal lines appears in place of the no-decompression limit.

To enter Plan mode:

1. Repeatedly press Mode until “PLAN” is displayed on the screen.

   Note: Plan mode is not available if the Trio computer has been set to “gage” mode.

2. Press Set to advance the depth or press Select to decrease the depth.

   The no-decompression time limits change automatically based on the depth.

3. If you want to exit plan mode, press and hold Mode for 1 to 2 seconds to return to time mode.

WARNING: Do not plan dives to depths deeper than those for which the NiTek Trio is capable of displaying an available no-decompression limit. Doing so could cause you to exceed the no-decompression limits or a limiting PO2 of 1.4 atmospheres (1.6 atmospheres for deco). This may increase your risk of decompression illness or CNS oxygen toxicity and can lead to serious personal injury or death.

Dive Computer mode

Dive computer mode is automatically entered when the computer enters the water. It begins performing its dive calculations once you descend below 4 feet (1.2 meters).

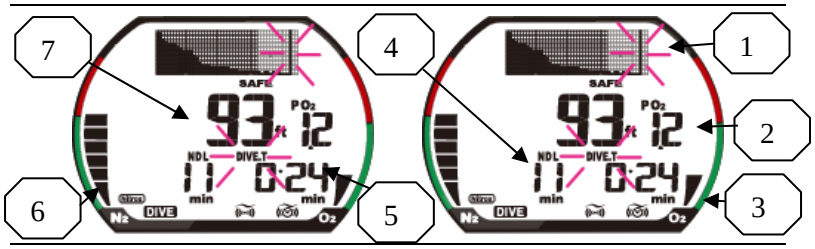
Caution: Prior to diving, always check to ensure that the FO2 settings are correct and that the computer is not in FO2 default.

While in diving mode, the computer calculates and displays information about your dive and prompts you with safety stop information and warnings if needed.

While underwater, there are two screens you can toggle between and you can switch from mix1 to mix2 or mix 3 when needed. You can also activate the back light feature.

Primary underwater screen

When you enter the water, the primary screen shows your depth, remaining no-decompression limit, dive time, PO2 for selected mix, N2 and O2 bar graphs, and the ascent rate indicator.



(1) Ascent rate indicator: This is a representation of how fast you are ascending. When you are ascending at a safe rate, it will display “SAFE”. If you are ascending too fast, it will flash the word “SLOW” and an audible alarm will sound to indicate you have exceeded the maximum safe ascent rate.

(2) PO2: This is the partial pressure of O2 at your current depth. It is based on the FO2 settings for the mixes.

(3) O2 (OLI) bar graph: This is the oxygen limit index (OLI) that calculates the cumulative effect of your exposure to elevated partial pressures of oxygen (PO2s). There are a maximum of eight bars. When all bars are displayed, it means that you have used 100 percent of your

"CNS" clock. This graph increases when you descend due to higher partial pressures and may decrease when you ascend.

(4) Remaining no-decompression limit (NDL): This is the time that is remaining (in minutes) before you reach the no-decompression limit. This NDL time limit increases when you ascend and decreases when you descend.

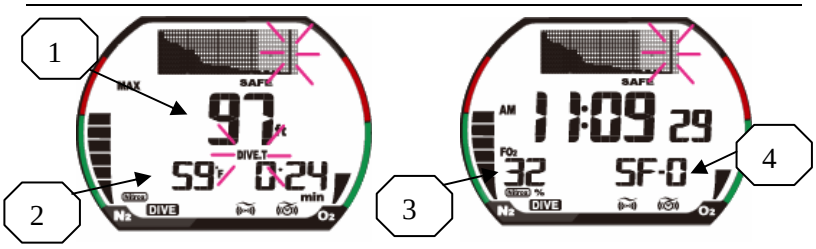
(5) Dive time: This is the time spent (in minutes) underwater, measured from the time you descended below 4 feet (1.2 meters).

(6) Residual nitrogen (N2) bar graph: This is how much nitrogen the computer assumes your body has absorbed. There are a maximum of nine bars. When all bars are displayed, it means that you are at or have exceeded the no-decompression limits.

(7) Depth: This is the current depth.

Secondary underwater screens

While underwater you can change to the secondary diving mode screens that display additional information. When you switch screens, temperature, maximum depth, and mixes are displayed.



(1) Maximum depth: This is the maximum depth that has been reached during the dive. **Note:** a maximum depth is not shown in this example, indicating the diver is descending.

(2) Temperature: This is the lowest temperature that has been reached during the dive.

(3) Mix: The percentage that you set is displayed.

(4) Safety Factor: The safety factor margin that you selected.

To display the secondary diving mode screens:

1. Press Select button.

   The back light turns on, and the first secondary screen is displayed.
2. Press Mode button.

The back light turns on, and the second secondary screen is displayed.

3. Repeat to return to the primary diving mode screen.

To store or insert a bookmark into the dive graph profile:

1. Press and hold the Set button for 1-2 seconds.

   The dive information will be stored for later review.

Changing gas mixes underwater

Because the NiTek Trio has the ability to use up to three different gas mixes (programmed in dive option set mode) during a dive, you need the ability to switch between the mixes while underwater.

Note: You can only switch gas mixes if the PO2 for the gas mix you are switching to is 1.6 atmospheres or less. Also, if mix2 or mix3 is not programmed, you can not switch mixes.

To change gases underwater:

1. Press and hold MODE for 2-3 seconds.

   The back light turns on and if you are using mix1, mix2 will blink and the mix is displayed. If you are using mix2, mix3 will blink and the mix is displayed, and so on.

2. Press and release SELECT to cycle between mixes.
3. Press and hold MODE for 1-2 seconds to select the mix to be used.
4. Press and release MODE again to return to the primary diving mode screen.

Safety Stop indication

The NiTek Trio has an automatic three-minute safety stop feature built in. On any dive, when you descend below 33 feet (10 meters) and then ascend above 20 feet (6 meters), “STOP” is displayed and blinks and the upper display includes a three-minute countdown.

During this time, if you ascend above 10 feet (3 meters), the countdown pauses. It resumes when you descend below 10 feet (3 meters). If you

descend below 20 feet (6 meters) during this time, “STOP” and the three-minute countdown disappear; and the NDL readings reappear. When you again ascend above 20 feet (6 meters), the three-minute countdown restarts.

Using the Compass

The NiTek Trio has several screens that can display current heading, depth, dive-time, and several alarm functions.

To display the compass screens:

1. Press and hold the SET button for 1-2 seconds.

   The back light turns on and the first compass screen is displayed, showing heading and dive-time as well as PGT, OLI and alarms.
2. Pressing and releasing MODE will toggle the display between current depth, dive-time, etc.
3. Press and hold the SET button for 1-2 seconds again to return to the primary diving mode screen.

To save a heading in the compass:

1. Press and hold SELECT for several seconds until the heading display and time is displayed at the top of the screen.
   The saved heading will be displayed to the left of the time readout. A small arrow indicating the saved heading will also be displayed above the angular display, if the saved heading is within 45 degrees of the current heading.
   Note: The reciprocal of your heading will also be indicated with a symbol in the display.
3. To erase/remove the saved heading, press and hold SELECT again for several seconds until the heading display and time is shown once more.

Warnings while in diving mode

While in diving mode, there are several warnings that you should be alert to.

Default warning

If any mix is in default at the beginning of a dive, an audible alarm sounds for three seconds. If you ascend and set the mix percentages, you can restart the dive. The upper display also blinks “WATER SET FO2!”, which is the best indication that the computer is defaulted before entering the water.

Default warning indicated by Nitrox and “WATER SET FO2!” blinking, and dashed line for mix

Ascent rate warning

The NiTek Trio assumes that you keep your ascent rate within the following limits:

Depth range	Ascent rate
0 to 19 feet (0 to 5.9 meters)	26 feet (8 meters) per minute
20 to 59 feet (6 to 17.9 meters)	39 feet (12 meters) per minute
59 feet (18 meters) or deeper	52 feet (16 meters) per minute

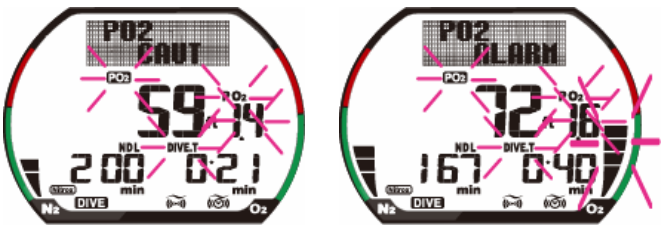
If you exceed these ascent rates, “SLOW” and the current depth flash for six seconds and an audible alarm sounds for three seconds. The warning displays until you slow your ascent to an acceptable rate or you reach 5 feet (1.5 meters). If the ascent rate is violated twice, the “slow” symbol appears in log mode after the dive.

Ascent rate warning with “SLOW” and depth blinking

PO2 limit warning

The PO2 warning indicates that you have exceeded the set PO2 and/or 1.6 atmospheres for the gas you are breathing. If you exceed the set PO2, an audible alarm sounds, and the PO2 symbol and PO2 value blink. “PO2 CAUT” (caution) also displays. If you exceed a PO2 of 1.6 atmospheres, in addition to the above audible alarm, “PO2 ALARM” and the OLI bar graph will blink.

Note: If the PO2 alarms activate at a depth of 20 feet (6 meters) or less, you probably have not exceeded the limiting PO2. What is likely is that you forgot to set the FO2 percentages prior to the dive. As a result, the computer has entered the FO2 default. See “Understanding FO2 default” for more information.



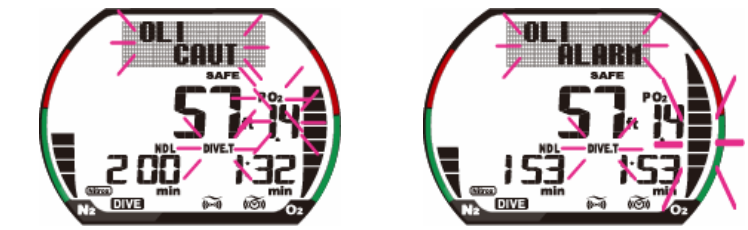
View 1 - PO2 limit warning with “PO2” and PO2 value blinking.
View 2 - Exceeded PO2 with OLI graph blinking.

Oxygen limit index (OLI) warning

The NiTek Trio’s oxygen limit index (OLI) reflects the cumulative effect of your exposure to elevated partial pressures of oxygen. The PO2 warning only accounts for the intensity of the exposure, but the OLI accounts for both the intensity and length.

When seven of the O2's eight bars are displayed, the computer's audible alarm sounds for three seconds, and "OLI CAUT" (caution) blinks on the upper display. If you do not ascend to a shallower depth, and all eight of the O2's bars are displayed, the alarm will sound again and "OLI ALARM" blinks again. "OLI ALARM" continues to flash until the O2 bar graph drops to seven bars. This warning will appear in log mode after the dive.

If the OLI and PO2 warnings activate at roughly the same time—and at relatively shallows depths, early in the dive—you probably have not exceeded your actual oxygen limits. What is likely is that you forgot to set the FO2 percentages prior to the dive and the computer has FO2 defaulted. See "Understanding FO2 default" for more information.

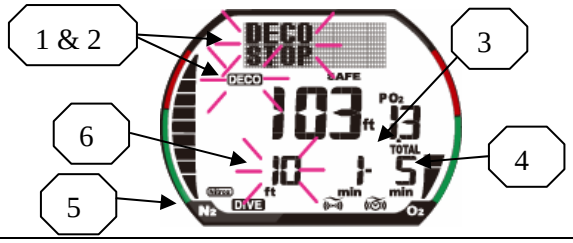


View 1 - OLI warning, "OLI CAUT" and "OLI ALARM" blinking.
View 2 - OLI graph also blinking.

Decompression warning

If you exceed the no-decompression limits, the computer enters decompression mode. An audible alarm sounds for twice for three seconds and “DECO STOP” blinks, indicating that you have decompression stop requirements.

Caution: Decompression diving is considered to substantially increase your risk of decompression illness more than dives made within no-decompression limits.



Decompression warning with “DECO STOP” and stop-depth information displayed

(1) Stop symbol: The “DECO STOP” symbols indicate that you need to stop at the depth displayed.

(2) Deco symbol: The “DECO” symbol displays when you have decompression requirements.

(3) Required stop time: This is the time you must remain at the indicated stop depth.

(4) Total ascent time: This is the total amount of time (in minutes) you must spend at the decompression stops and the ascent time between decompression stops.

(5) Nitrogen (N2) bar graph: This is how much nitrogen the computer assumes your body has absorbed. There are a maximum of nine bars. When all bars are displayed, it means that you are at or have exceeded the no-decompression limits and have entered decompression.

(6) Required stop depth: This is the required decompression stop depth.

Decompression stop violation warning

A decompression stop violation warning takes place when you ascend to a shallower depth than the indicated stop depth or if you do not spend sufficient time at the required depth before ascending. When you enter this violation, the computer's audible alarm sounds twice for three seconds each, and the current depth, stop depth, stop time, and "DECO AL STOP!" blink. These items continue blinking as long as you remain shallower than the indicated stop depth.

Note: During a deco stop violation, the computer's ascent rate warning does not function.

Caution: If you do not correct an indicated deco stop violation, the warnings continue for several minutes after surfacing. At this point, the computer is not usable for the next 48 hours.

Decompression stop violation with "DECO AL STOP!" and current depth, stop depth, and stop time blinking

Gauge mode

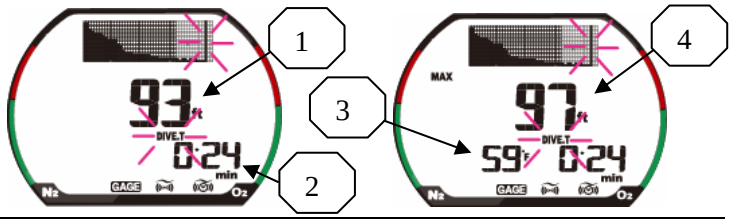
Gauge mode is automatically entered when the computer enters the water. It begins displaying depth and time once you descend below 4 feet (1.2 meters).

Gauge operation is when the NiTek Trio is operating simply as a depth gauge and bottom timer. “Gage” and the dive-profile are displayed on the screen, exposure to nitrogen and oxygen and no-decompression limits are not tracked, and no bar graphs are displayed. This mode is used by divers who are relying solely on dive tables for decompression information. The operating depth limit when in gauge operation is 328 feet (100 meters).

Note: To enter and set up gauge mode, see “Using gauge mode.”

Note: If a dive has been made in gauge mode, the “Dive” mode can not be chosen for 48 hours. You cannot select Gauge mode if the computer determines there is still residual nitrogen from a previous dive while in Dive mode, or if the surface interval has been less than 10 minutes.

While in gauge mode underwater, there are two screens you can toggle between. The primary screen displays depth and time. The secondary screen displays maximum depth and temperature.



Gage mode, primary and secondary screens

(1) Current depth: This is the current depth of the dive.

(2) Total dive time: This is the total time for the dive.

(3) Temperature: This is the lowest temperature reached on the dive.

(4) Max depth: This is the maximum depth reached during the dive. **Note:** a maximum depth is not shown in this example, indicating the diver is still descending.

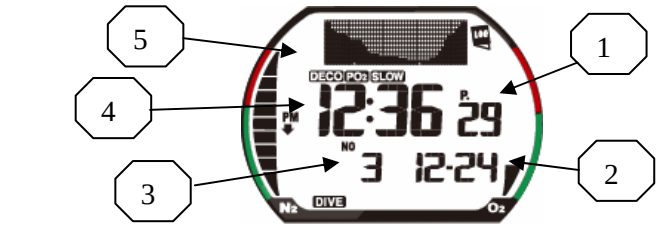
To toggle between screens underwater:

1. Press and hold Set for 4-5 seconds.
   The back light turns on, and the computer switches to the secondary screen.
2. Release Set to return to the primary screen.

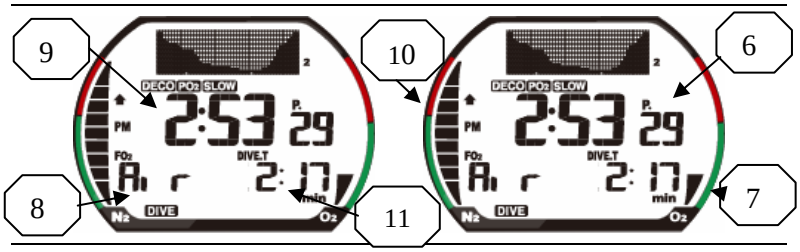
Log mode

For each dive, the NiTek Trio stores information, such as depth, time, temperature, etc. in a log. This stored log information can be viewed directly from the NiTek Trio's screen when in log mode, and is not user-resettable

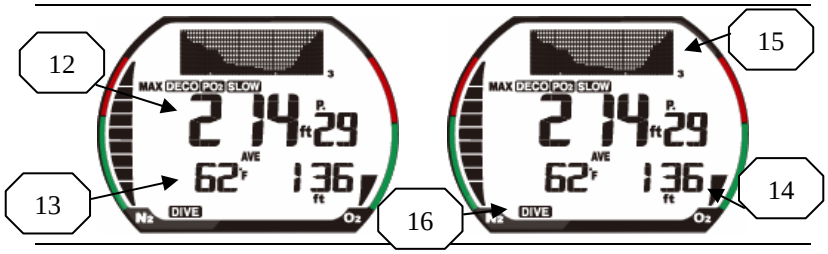
Because of the amount of information the NiTek Trio stores, there are three pages that you can toggle between for each dive. Each dive is assigned a number, beginning with one, for the day. Each log page displays the log number and the page number, making it easy for you to toggle between the dive log pages.



Page one for a dive in Log mode



Page two for a dive in Log mode



Page three for a dive in Log mode

(1) Dive log number: This is the dive log number. Each dive has three pages of logged information.

(2) Date: This is the month and day of the dive.

(3) Dive number for day: This is the dive number for the day.

(4) Descent time: Time the dive started, indicated by a down arrow.

(5) Altitude Rank: The altitude ranking at which the dive was made.

(6) Dive page number: This is the page number for the dive. Each dive has three pages of logged information.

(7) O2 OLI bar graph: The CNS toxicity level at the end of the dive.

(8) FO2 gas percentages: These are the FO2 gas percentages that you entered for the dive. All calculations were based on these percentages.

(9) Ascent time: Time the dive ended, indicated by an up arrow.

(10) Nitrogen (N2) exposure bar graph: This is the amount of residual nitrogen in your body at the end of the dive.

(11) Dive time: This is the actual in water time for the dive.

(12) Maximum depth: The maximum depth reached during the dive.

(13) Temperature: Tthe coldest temperature reached during the dive.

(14) Average depth: This is the average depth reached during the dive.

(15) Depth graph: This is a graphical view of the entire dive.

> **Note:** In this example, the altitude rank was “0”, while “DECO”, “PO2” and “SLOW” indicators are visible, indicating those conditions had been reached and are recorded in the log.

(16) “Dive” or “Gage”: The dive was conducted in “Dive” or “Gage” mode. **Note**: When in “Gage” mode, the FO2 (8), and O2 OLI (7) and Nitrogen (10) exposure bar graphs will not be displayed. This indicates the NiTek Trio is not recording that data.

To view a dive log:

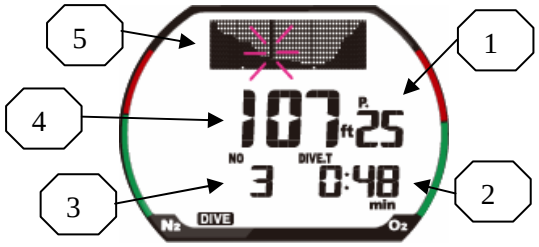
1. Repeatedly press Mode until the logbook function graph is displayed at the top of the screen.
   “WAIT” may be displayed momentarily, and then the logged dive information will be displayed.
2. Press Select to scroll “up” through the logged dives. To fast-scroll, press and hold Select.
   Press Set to scroll “down” through the logged dives. To fast-scroll, press and hold Set.
3. Once a dive log is selected, you can use Set and Select to toggle between pages of the dive log.
   Note: Refer to items (1), (3), and (6) above to help you navigate between screens.
4. To exit log mode, press and hold Mode for 1 to 2 seconds to return to time mode.

Profile mode

Profile mode enables you to see a record of the depths you reached at various points during a dive. You can display a detailed profile of each dive stored in the log. When a dive is selected, the computer automatically displays the depth and the time in the dive when you reached that depth until it reaches the end of the dive.

Dive profile information is either stored in 10- or 30-second intervals during a dive. This must be set in dive mode before a dive. Refer to “Setting the dive profile sampling rate” for more information.

The dive number and date of the dive are displayed when you scroll through the dives. This makes it easy to find the dive profile you want to view.



Dive Profile mode

(1) Dive log entry number: This is the dive number that corresponds to the dive number when in log mode.

(2) Dive time: This tells you at what time during the dive you reached the depth indicated.

(3) Number of dives per day: This corresponds to the number of dives per day.

(4) Depth: This is the depth that corresponds to the displayed dive time. Depending on what profile sampling rate you have set, either two depth readings (30-second rate) or six depth readings (10-second rate) are displayed for each minute during a dive.

(5) Depth graph: This is a graphical view of the entire dive, with the moving point of the dive at that time.

To view a dive profile:

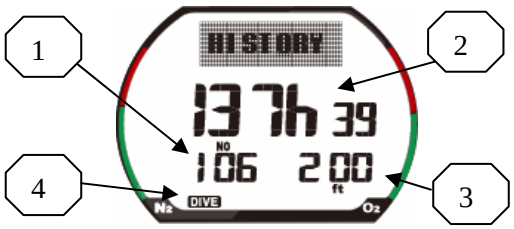
1. Repeatedly press Mode until the logbook function graph is displayed at the top of the screen.

2. Using Select and Set, scroll through the dives until you reach the dive you wish to review.
3. Press Mode again to enter the Profile mode.

   “WAIT” may be displayed momentarily, and then the logged dive information and graph will be displayed.
3. Once a dive profile is selected, the computer automatically progresses through the different depths and times of the dive.
4. If you want to exit profile mode, press and hold Mode for 1 to 2 seconds to return to time mode.

History mode

The total dive time, total number of dives and maximum depth reached are displayed when in History mode, and are not user-resettable. The NiTek Trio will separately track dives in both “Dive” and “Gage” functions, so you can have a complete record of your diving experiences.



History mode, Dive and Gage

(1) Total number of dives: This corresponds to the number of dives recorded on the NiTek Trio in the particular mode.

(2) Total dive time: This is the total dive time logged on the NiTek Trio in the particular mode.

(3) Maximum Depth: This is the maximum depth reached on the NiTek Trio in the particular mode.

(4) “Dive” or “Gage”: Dive modes.

To view the History :

1. Repeatedly press Mode until “DIVESET” is displayed at the top of the screen.
2. Using the Select and Set buttons, select either “DIVE” or “GAGE” mode for history viewing.
3. Repeatedly press Mode until “HISTORY” is displayed at the top of the screen.

   Your total dive information is displayed.
4. To view history information for the other mode (ie, DIVE vs GAGE), repeat steps 1 through 3 above, selecting the corresponding mode.

PC Transfer mode

You can transfer the stored dive log information to your personal computer using the optional NiTek Trio Docking Station and its associated NiTek DiveLog software.

Please note that the NiTek Trio Dive Log software does not currently work on Vista 64 bit operating systems. Seiko is working with Microsoft to get certification as well as modify the drivers and installer. We apologize for this inconvenience.

To enter PC Transfer mode:

1. Follow the Docking Station instructions to load the NiTek DiveLog software to your PC, and to connect the Docking Station to your NiTek Trio dive computer.
2. On your NiTek Trio, repeatedly press Mode until “SET CRADLE” is displayed at the top of the screen.

   “LINKED” will be displayed in the screen when the dive computer and PC are connected.
3. Transfer the dive log data to your PC.
4. To exit PC Transfer mode, press and hold Mode for 1 to 2 seconds to return to time mode.

Surface mode (Upon Surfacing From a Dive)

Once you surface from a dive, the NiTek Trio automatically switches to time mode, with other information displayed on the screen that pertains to the dive you just completed. This includes:

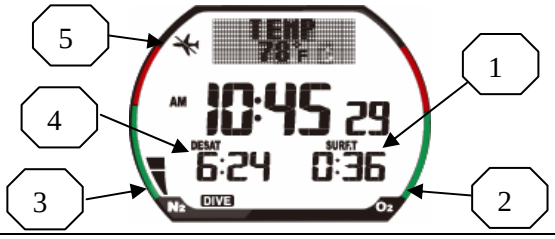
- Current temperature
- Desaturation time *
- Surface interval time
- No-fly symbol
- Nitrogen (N2) bar graph *
- Oxygen limit index (OLI) bar graph *

  * not shown in “Gage” mode

This additional information is displayed on the screen until the NiTek Trio calculates that it is no longer needed or after 24 hours have passed since the last dive.

Note: If you are making repetitive dives, you need to pay attention to your surface interval and use it in conjunction with plan mode. This ensures that you stay within no-decompression limits.

Note: Unless prior dives that day have been conducted on air (FO2 of 21 percent), the NiTek Trio will reset the gas mixture on following dives to an FO2 of 99 percent if the surface interval is 10 minutes or longer. Please be certain to reset your gas mixture between dives.



NiTek Trio showing (1) surface interval time, (2) O2 and (3) N2 bar graphs (4) desaturation time, and (5) no-fly symbol.

Surface mode :

(1) Surface interval time: This is the amount of time you have spent on the surface since your last dive if there is residual nitrogen present from a previous dive. It can display up to 24 hours of surface interval time.

(2) O2 OLI bar graph: This indicates CNS toxicity level at the end of the dive. This drops as your surface interval time increases.

(3) Nitrogen (N2) exposure bar graph: This is the amount of residual nitrogen in your body at the end of the dive. This drops as your surface interval time increases.

(4) Desaturation time: This is the amount of time, expressed in hours and minutes, that must pass before the residual nitrogen levels drop to a point where subsequent dives are treated as a single (non-repetitive) dives. This is not the same as "time to fly (see no-fly symbol below)."

(5) No-fly symbol: This symbol, when displayed, indicates that you should not fly or go to any altitude higher than the one you are diving in until it disappears from the screen.

When the computer finishes calculating your desaturation time and your surface interval time is over 12 hours, the no-fly symbol turns off. If the computer finishes calculating your desaturation time and your surface interval time is *not* over 12 hours, then the no-fly symbol stays on until 12 hours of surface time have passed.

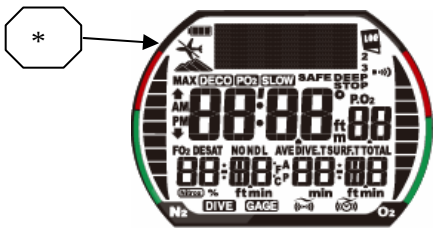
Note: If the dive was made in "Gage" mode, the "Gage" icon will be displayed and the OLI and N2 bar graphs will not be displayed.

Note: After a dive in "Gage" mode, you will be responsible for calculating your own desaturation and surface-interval times.

WARNING: It is recommended that you wait at least 24-hours following any dive before flying in an aircraft or driving to altitude. Failure to allow sufficient surface interval time before doing so may increase your risk of decompression illness (DCI).

Altitude operation

The NiTek Trio adjusts automatically for diving at altitudes of up to 19,685 feet (6,000 meters). To show that the NiTek Trio has made the altitude adjustment, it displays the altitude settings using symbols representing mountains.



Altitude rank symbols

Symbol	Altitude range
No symbol	Sea Level to 3,281 feet (1000 meters)
	2,297 to 5,906 feet (700 to 1,800 meters)
	4,593 to 8,530 feet (1,400 to 2,600 meters)
	7,546 to 19,685 feet (2,300 to 6,000 meters)
E	Out of range above 19,685 feet (6,000 meters)

Prior to using the NiTek Trio at altitudes substantially above sea level, you should find out what the actual altitude of your dive site is. Make certain that the altitude settings the NiTek Trio displays accurately match the altitude you are at.

Notes

- Do not use the NiTek Trio unless the altitude settings accurately match the actual height above sea level you are diving in. Doing so could cause the NiTek Trio to display inaccurate information.
- Do not use the NiTek Trio when the “E” symbol is displayed. This means that you are above an altitude of 19,685 feet (6,000 meters), which is beyond the NiTek Trio’s ability to function accurately.
- Do not place the NiTek Trio in dive mode when making sudden, substantial changes in altitude, such as when flying in an airplane. This can be caused by storing the NiTek Trio with wet dive gear, which can touch its external electrical contacts and cause it to enter

dive mode. This can interfere with the computer's ability to function accurately.

The NiTek Trio monitors and displays altitude information in all modes, except PC Transfer mode. Upon arriving at altitude, the NiTek Trio's residual nitrogen bar graph may show that there is excess nitrogen present, even though you may not have made any dives in the preceding 24 hours.

If you have obtained the altitude specialty diver training, which everyone should do before diving at altitudes substantially above sea level, you already understand that this should be expected. By ascending to a higher altitude from a lower one, your body has more nitrogen saturated in body tissues than would be present had you spent the preceding 24 hours at the higher altitude. By displaying residual nitrogen and a surface interval, your NiTek Trio is merely reflecting this fact.

If the level of residual nitrogen calculated by the NiTek Trio is unusually high (seven or eight bars) when going to altitude, the computer will be unable to enter dive mode. Avoid taking the computer to altitude when residual nitrogen levels are this high, and do not enter the water until nitrogen levels have dropped substantially.

Chapter 3

Care and Maintenance

Summary

This chapter provides care and maintenance and battery information for the NiTek Trio.

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Low battery warning • 49
    Replacing the battery • 49

Proper handling techniques

The NiTek Trio is constructed to withstand the most demanding diving conditions. It is, however, a high precision instrument, which requires proper care.

Caution: Failure to follow these handling techniques may result in damage to the NiTek Trio.

- Do not store the computer in hot and/or humid environments. The pressure transducer is sensitive to both heat and humidity. If impaired, it may cause incorrect altitude or depth readings.
- When in hot and/or humid environments, dip the computer in water for several minutes to cool it to room temperature before using it. If it is cold, allow the computer to warm to room temperature. Do not take it underwater immediately after doing so.
- Do not transport your NiTek Trio on an aircraft or take it to altitude while it is sealed in an air-tight container. Doing so may interfere with its ability to correctly read, display, and track depth information.
- The NiTek Trio's Liquid Crystal Display (LCD) may darken if left in a hot environment (such as on a car's dashboard). It will return to normal once allowed to cool, however, extensive exposure to heat may shorten LCD life.
- Be aware that weather-related changes in air-pressure can cause incorrect display of altitude settings. Be sure to check indicated altitude settings against actual altitude before use. Your NiTek Trio is not to be disassembled by anyone other than Dive Rite or its authorized dealers. Unauthorized disassembly will violate the warranty.
- If the NiTek Trio does not appear to be functioning properly, do not use it to dive. Return it to your authorized Dive Rite dealer for repair.
- The NiTek Trio should not come in contact with solvents or any type of chemical substances
- Do not use compressed air to dry the NiTek Trio
- Do not use the NiTek Trio in hyperbaric chambers if the device is not fully submerged in water
- Always rinse the computer with freshwater after use
- Store the NiTek Trio in a cool, dry location. After diving, wipe the computer dry and store it in a location separate from other damp items.

Low battery warning

The battery that comes with the NiTek Trio is designed to last for up to three years under normal use. You may get more or less use from the battery depending on how often it is used and how it is cared for.

Cautions

- All NiTek Trio functions may cease within two to three days of the low battery symbol first appearing. Always have low batteries replaced promptly.
- A depleted battery that is left in a NiTek Trio for a long period of time may leak. Replace batteries promptly.
- Never replace the battery when desaturation is under way, since all data for desaturation calculation would be lost.

Replacing the battery

Battery replacement is an easy operation that can be done by the user. The battery must be replaced whenever the low battery symbol (fixed or blinking) is displayed.

Note: When you replace the battery, all data regarding desaturation, time, and date, etc. is lost. The dive-log does not reset.

To replace the battery:

1. Unscrew the clear back cover using a coin in the direction indicated by the arrows.
2. Examine the battery and battery housing for signs of corrosion. Wipe off any sand or dirt from the cover and o-ring.
3. Remove the battery.
4. Replace the battery; making sure that the polarity is correct. For correct battery size, refer to “Specifications.”
5. Place a thin layer of silicone grease on the cover o-ring.
6. Screw the battery cover back into place. Do not over tighten.
7. Reset the time and date.

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